

## 4.0 CUMULATIVE IMPACTS

Both NEPA and CEQA require that cumulative impacts of the proposed action in combination with other projects be addressed in an EIS/EIR.

### 4.1 CUMULATIVE IMPACT METHODOLOGY

This section addresses the cumulative impacts of the proposed action in combination with other projects. (The “proposed action” when used in this analysis refers to implementation of the Conservation Plan and issuance of a section 10 [a][1][B] permit by the Service.) A list approach was used to identify projects that are closely related to the proposed action (i.e., either located within or in the vicinity of the planning area and having the potential to impact common resources) that could result in cumulatively considerable impacts. Where appropriate, the analysis includes potential impacts on common resources that extend outside the planning area (e.g., transboundary impacts). Federal, state, and local agencies and tribal governments with planning and regulatory authority within or in the vicinity of the planning area were contacted to identify projects that may result in a cumulative impact. These projects then were examined for their potential to result in a cumulative impact when combined with the proposed action. In addition, future Federal and non-Federal covered activities were reviewed and included based on the criteria discussed above.

Many of the impacts of the proposed action would result from construction activities, as would many of the impacts of the other projects considered in the cumulative impact analysis. Most of the adverse construction-related impacts of the proposed action would be temporary and localized (such as impacts related to air quality, noise, erosion, and spills of hazardous materials, as well as some impacts on aesthetics, water quality, and biological resources), and individual construction sites would be dispersed over a wide geographic area. Moreover, construction would be implemented over a long period of time, as shown on Tables 2.1-8a through 2.1-8d, with relatively minor amounts of construction occurring in any given year. Thus, construction associated with the proposed action would not likely overlap in time or place with the other projects considered in the cumulative impact analysis, although this could occur.

In general, if the proposed action would result in a significant impact on a resource that also could be adversely affected by another project, the impact is considered to be a significant cumulative impact, although the potential for the combination of less than significant impacts to result in significant cumulative impacts also is considered. The proposed action would have long-term beneficial impacts on biological resources and aesthetics and thus would not contribute to a long-term cumulative adverse impact on these resources.

Section 4.2 describes the projects included in the cumulative impact analysis, the status of their environmental documentation, anticipated environmental impacts of those projects, and the potential cumulative impacts of those projects in combination with those of the proposed Conservation Plan. Section 4.3 summarizes cumulative impacts by each resource and identifies mitigation measures where appropriate. The implementation of these mitigation measures may be the responsibility of agencies other than the lead agencies for this EIS/EIR, who would adopt them as part of their own environmental review and approval processes.

## 4.2 ANALYSIS OF CUMULATIVE IMPACTS

This section provides an analysis of the potential cumulative impacts that would affect the present environment within, and in the vicinity of, the planning area. An overview of the present environment in the planning area, as well as the historical environmental changes, is provided in section 3.0. These changes have occurred primarily as a result of actions affecting the flow regime of the LCR (e.g., the construction of large, mainstem dams such as Hoover Dam and Glen Canyon Dam). The river is no longer free flowing and does not constitute a continuous ecosystem because of the many impoundments along its length and the hydrologic regime does not support extreme fluctuations. Moreover, the vegetation within the planning area has also changed over time with a general decline of native communities.

### 4.2.1 Future Covered Activities

Future Federal and non-Federal covered activities for which ESA compliance is being sought by the LCR MSCP participants (refer to section 1.2.2) were reviewed to identify those that could result in cumulative impacts; these generally were projects that would result in new construction and associated construction-related impacts, as would the proposed action, or have the potential to affect those resources that are central to the proposed action (e.g., agricultural resources and biological resources), although the change in point of diversion of up to 1.574 mafy is considered, as well.

#### *Changes in Points of Diversion of up to 1.574 mafy of Colorado River Water*

##### *Project Description*

Covered activities include the potential changes in points of diversion of up to 1.574 mafy of Colorado River water by water contractors in Arizona, California, and Nevada. Diversion changes are expected to occur in response to shifts in water demand during the 50-year term of the Conservation Plan. Neither the source nor the recipient of water that will be diverted as a result of future projects can be determined until these projects are developed. However, the LCR MSCP participants expect that there will be shifts in demand among water users within each of the Lower Basin States and between the states. Although no additional water would be diverted in a normal water year as a result of these future projects, the points of diversion would change based on demand.

##### *Project's Environmental Analysis Status and Anticipated Impacts*

Specific transfers for the entire 1.574 mafy have not been identified; therefore, the impact analysis for the changes in points of diversion is programmatic. It is anticipated that a shift in water diversion from the southern reaches of the Colorado River upstream to Lake Mead and to Lake Havasu will occur. Potential impacts could include changes in water surface elevation along the LCR where points of diversion are changed, which could result in concomitant impacts on biological resources. These actions also could result in increased water conservation on agricultural lands, including lands within the planning area. This could lead to increased short-term and long-term fallowing and the construction of on-farm conservation measures, such as canal lining and irrigation system improvements. These changes could result in impacts on agricultural resources in the event that long-term fallowing were required as well as

associated changes to socioeconomic resources (e.g., revenue, sales tax, and employment) and environmental justice (from the potential loss of agricultural jobs). Fallowing also could result in increased fugitive dust emissions. Construction of on-farm conservation measures could result in short-term impacts on air quality, geology and soils/water quality (from erosion), cultural resources, hazards, biological resources, and noise.

#### *Cumulative Impacts with the Proposed Action*

The proposed action would not change the surface water elevation of the LCR; therefore, no cumulative impacts on hydrology associated with water elevation would occur. Impacts on biological resources resulting from the changes in surface water elevation would be mitigated by the implementation of the proposed action, and a cumulative impact would not occur.

Both the proposed action and the implementation of water conservation measures, if needed, would result in construction-related air quality impacts from increased combustive and PM<sub>10</sub> emissions. Combustive emissions from both projects would be mobile and intermittent and would be *cumulatively less than significant*. The proposed action would result in a significant, potentially unavoidable, impact from increased PM<sub>10</sub> emissions, and if construction associated with the proposed action and water conservation projects occurred at the same general time and in the same general location, fugitive dust emissions would be cumulatively *significant*. Fallowing associated with the changes in points of diversion also could result in increased fugitive dust emissions, but this could be offset by the proposed action, which would convert some agricultural land to other land cover types, and long-term impacts would not be cumulatively significant.

Both projects would have the potential for construction-related impacts on biological resources, but these would be *cumulatively less than significant*<sup>1</sup> because the impacts of both projects would be temporary and localized and would not cause substantial adverse changes to vegetation or wildlife communities along the LCR. Moreover, the water conservation projects likely would be constructed on farmland, thus minimizing the potential for impacts on biological resources.

Both projects would result in increased ambient noise levels during construction, but impacts would be considered *cumulatively less than significant* because noise impacts are highly localized, and impacts would be temporary, lasting only for the duration of the construction<sup>2</sup>. Both projects also would have only minor, temporary, and localized construction-related impacts on hazards, geology and soils, and water quality, and the impact on these resources would be *cumulatively less than significant*. Cumulative impacts on cultural resources could be *cumulatively significant* because construction associated with both actions could affect significant cultural resources.

1 The proposed action could result in a significant impact on non-covered sensitive species, particularly birds, as a result of backwater creation. The anticipated schedule includes construction of only 15 acres of backwaters per year and these would be dispersed throughout Reaches 3 through 5. This impact would not in itself trigger a cumulatively significant impact unless other projects would specifically affect the same species.

2 The proposed action could result in significant long-term noise impacts from pump operations. Pumps would be located in agricultural or undeveloped areas, and it is unlikely that they would be located in the vicinity of noise-sensitive receptors; thus, the operation of individual pumps, which would have a highly localized impact, would not contribute to a long-term cumulative noise impact in combination with the other projects considered in this analysis.

1 Since water conservation measures likely would be implemented on agricultural lands,  
2 construction would not result in aesthetic impacts since these are typical of agricultural areas.  
3 Although the proposed action could result in temporary less than significant impacts,  
4 cumulative impacts would not occur.

#### 5 *Jetty Construction*

##### 6 *Project Description*

7 In RMs A238.5-A240.0, between nine and 21 new jetties may be constructed and are currently in  
8 the pre-design phase. Along RMs 50-260, a total of one to 20 new jetties may be constructed.  
9 These may be constructed on the LCR as needed.

##### 10 *Project's Environmental Analysis Status and Anticipated Impacts*

11 The jetty projects have not yet undergone environmental review. Construction could result in  
12 temporary impacts on aesthetics, biological resources, air quality, hazards (due to the use of  
13 hazardous materials during construction), water quality (due to the use of hazardous materials  
14 during construction and turbidity resulting from construction in and near water), and geology  
15 and soils. Long-term aesthetic impacts also may occur.

##### 16 *Cumulative Impacts with the Proposed Action*

17 Both the proposed action and the construction of water conservation measures would result in  
18 construction-related air quality impacts from increased combustive and PM<sub>10</sub> emissions.  
19 Combustive emissions from both projects would be mobile and intermittent and would be  
20 *cumulatively less than significant*. The proposed action would result in a significant, potentially  
21 unavoidable, impact from increased PM<sub>10</sub> emissions, and if construction associated with the  
22 proposed action and jetty projects occurred at the same general time and in the same general  
23 location, and if the latter required earth-moving activities, fugitive dust emissions would be  
24 *cumulatively significant*.

25 Both projects would have the potential for construction-related impacts on terrestrial and  
26 aquatic biological resources, but these would be *cumulatively less than significant* because the  
27 impacts of both projects would be temporary and localized and would not cause substantial  
28 adverse changes to vegetation or wildlife communities along the LCR.

29 Both projects would result in construction-related, short-term disturbances to aesthetic  
30 resources, but these would be *cumulatively less than significant* since they would be temporary  
31 and localized. Depending on their placement, the jetties could have long-term adverse aesthetic  
32 impacts, but the proposed action would have long-term beneficial impacts on aesthetics, and  
33 would not contribute to a long-term cumulative impact in combination with the jetty  
34 construction projects. The proposed action and the jetty projects would have only minor, short-  
35 term, and localized construction-related impacts on hazards, geology and soils, and water  
36 quality, and the cumulative impact would be *less than significant*.

## ***Riparian Plant Community Rehabilitation and Restoration Projects***

### *Project Description*

Riparian plant community rehabilitation and restoration projects could be implemented on both Lake Mead and Lake Mohave. On Lake Mead, such projects would likely be restricted to the tributary confluence areas of the Virgin River, Muddy River, and Las Vegas Wash. Activities associated with these projects may include the removal of non-native saltcedar by mechanical means (e.g., chain saws or bulldozers), prescribed fire, and the use of EPA-registered herbicides. Native riparian species, including willow and cottonwood, may be planted using seed, cuttings, poles, or transplants of nursery stock. The total project area would be approximately 500 acres, and it is not anticipated that more than 20 acres would be under construction in any one year.

On Lake Mohave, a secondary objective of saltcedar removal and willow plantings would be the enhancement of aesthetics for recreation in selected areas through the creation of open shoreline or shade. Saltcedar removal for recreational purposes would be limited to specific areas; no more than 10 coves on Lake Mohave (potentially including Nevada Telephone Cove, North Telephone Cove, South Telephone Cove, Cabinsite Cove, and the boat-beaching area adjacent to the Arizona Hot Springs drainage) would be affected, and it is not expected that any areas where saltcedar would be cleared would exceed 2 acres. The total project area would be approximately 100 acres, and it is not anticipated that more than 5 acres would be under construction in any one year.

### *Project's Environmental Analysis Status and Anticipated Impacts*

The riparian plant community rehabilitation and restoration projects have not yet undergone environmental review. Anticipated impacts include long-term beneficial impacts on recreation, aesthetics, and biological resources. Vegetation removal and replanting activities would likely result in similar impacts as the proposed action, including impacts on biological resources, fire hazards, air quality, hydrology, geology and soils, cultural resources, and noise.

### *Cumulative Impacts with the Proposed Action*

Both the proposed action and the plant community rehabilitation and restoration projects would result in construction-related air quality impacts from increased combustive and PM<sub>10</sub> emissions. Combustive emissions from both projects would be mobile and intermittent and would be *cumulatively less than significant*. The proposed action would result in a significant, potentially unavoidable, impact from increased PM<sub>10</sub> emissions, and if construction and prescribed fires associated with the proposed action and rehabilitation and restoration projects occurred at the same general time and in the same general location, fugitive dust emissions would be *cumulatively significant*.

Both projects would have the potential for construction-related impacts on terrestrial and aquatic biological resources, but most of these would be cumulatively *less than significant* because the impacts of both projects would be temporary and localized and would not cause substantial adverse changes to vegetation or wildlife communities along the LCR. The proposed action would have less than significant or significant impacts on native common and sensitive fish species inhabiting the Virgin and Muddy rivers. Impacts on these fish could be

1 *cumulatively significant but mitigable to less than significant* if the riparian plant community  
2 rehabilitation and restoration projects were implemented along these rivers. Long-term impacts  
3 on biological resources generally would be *cumulatively beneficial* because both projects would  
4 replace non-native vegetation with native vegetation.

5 *Significant* cumulative impacts on cultural resources could occur if both projects affected  
6 significant cultural resources. All other impacts on the resources identified above would be  
7 *cumulatively less than significant* because only 25 total acres in any given year would be affected  
8 by the riparian plant community rehabilitation and restoration projects, and impacts would be  
9 localized. Long-term *cumulatively beneficial* impacts on aesthetics would occur since the  
10 proposed action would establish 8,132 acres of habitat and the Lake Mead/Lake Mohave  
11 restoration projects would restore an additional 600 total acres of vegetation.

#### 12 ***Farmland Development/Construction of Irrigation Systems***

##### 13 *Project Description*

14 A number of tribal irrigation projects are planned, including the Colorado River Indian  
15 Irrigation Project (25,000 acres of potential additional irrigated land), the Fort Mojave Irrigation  
16 Project (3,745 acres of potential additional irrigated land), the Chemehuevi Irrigation Project  
17 (1,855 acres of potential additional irrigated land), a Fort Yuma Agency irrigation project that  
18 would include 600 acres of potential additional irrigated land, and a total of 500 acres of  
19 irrigated agriculture development on three Cocopah Indian Reservation sites. The projects  
20 would include the creation of lined and unlined canals and maintained roadways.

##### 21 *Project's Environmental Analysis Status and Anticipated Impacts*

22 These projects have not yet undergone environmental review. Anticipated impacts of the  
23 planned irrigation projects include beneficial impacts on agriculture and construction-related  
24 impacts associated with the creation of canals and roadways, such as impacts on aesthetics, air  
25 quality, biological resources, cultural resources, hazards (due to the use of hazardous materials  
26 during construction), water quality (due to the use of hazardous materials during construction),  
27 and geology and soils.

##### 28 *Cumulative Impacts with the Proposed Action*

29 Although the proposed action could result in the conversion of agricultural land to other land  
30 cover types, the tribal irrigation projects would have beneficial impacts on agriculture by  
31 increasing the amount of land in agricultural production; therefore, no adverse cumulative  
32 impacts would occur.

33 Both the proposed action and the tribal irrigation projects would result in construction-related  
34 air quality impacts from increased combustive and PM<sub>10</sub> emissions. Combustive emissions  
35 from both projects would be mobile and intermittent and would be *cumulatively less than*  
36 *significant*. The proposed action would result in a significant, potentially unavoidable, impact  
37 from increased PM<sub>10</sub> emissions, and if construction associated with the proposed action and  
38 tribal irrigation projects occurred at the same general time and in the same general location,  
39 fugitive dust emissions would be *cumulatively significant*.

1 The tribal irrigation projects could potentially convert other land cover types to agricultural  
2 land, which could result in an adverse impact on biological resources, but the proposed action  
3 would create 8,132 acres of land cover types that provide habitat for covered species. Thus, it  
4 would not contribute to a long-term cumulative impact in combination with the tribal irrigation  
5 projects.

6 Both the proposed action and the tribal irrigation projects would cause adverse impacts on  
7 aesthetics during construction; however, these impacts would be *cumulatively less than significant*  
8 because they would be temporary and localized. The tribal irrigation projects could result in  
9 changes to the visual character along the LCR if they converted undeveloped land to  
10 agricultural uses, but the proposed action would have long-term beneficial aesthetic impacts  
11 and would not contribute to a cumulative impact in combination with the tribal irrigation  
12 projects.

13 Construction-related activities would result in *cumulatively less than significant* impacts on the  
14 remaining resource areas mentioned above because they would be short-term, minor, and  
15 localized.

#### 16 ***Yuma Area Water Resources Management Group Drainage Project***

##### 17 *Project Description*

18 The Yuma Area Water Resource Management Group Drainage Project is a plan by Reclamation  
19 to achieve better control of groundwater levels in the Yuma Area. This is being accomplished  
20 by increasing total drainage pumping on the Yuma Mesa and in the Yuma Valley to reduce  
21 groundwater levels in the Yuma Valley to acceptable levels of 6–8 feet below the ground  
22 surface. Under the plan, the original drainage wells have been upgraded and are being  
23 operated for a larger portion of the year, and six new drainage wells and additional  
24 groundwater monitoring wells have been installed. Once the desired groundwater levels are  
25 achieved, the drainage pumping on the Yuma Mesa and Yuma Valley will be reduced to  
26 maintain those levels in the future. It is expected that the highest drainage pumping will occur  
27 during the first 5 years after installation of the new facilities, and then the pumping will be  
28 reduced to that required to maintain the desired groundwater levels. The plan calls for  
29 increasing drainage pumping by about 40,000–50,000 af for 5 years, beginning in 2003. The  
30 drainage pumping will then be reduced to maintain those groundwater levels in the future. Of  
31 the total drainage pumping, some drainage will be discharged to the Colorado River above the  
32 NIB and some will be discharged into the Yuma Valley drainage system for delivery to Mexico  
33 at the SIB.

##### 34 *Project's Environmental Analysis Status and Anticipated Impacts*

35 A Categorical Exclusion was prepared for *Repairs and Modifications to the Yuma Mesa Conduit*  
36 *(YMC) Drainage System* (YAO-CE No. 2001-02) on March 16, 2001 (USBR 2001b). On September  
37 7, 2003, the Categorical Exclusion was supplemented by an analysis entitled *Effects on Riparian*  
38 *and Marsh Communities along the Colorado River Due to Water Table Reduction in the Yuma Valley*  
39 (USBR 2003b). The Categorical Exclusion concluded that the project would be implemented in  
40 highly disturbed areas and would not affect sensitive species or cultural resources or  
41 significantly affect other environmental resources. It also concluded that the project would help

control groundwater levels in the Yuma Valley and improve the salinity of flows into Mexico at the SIB. The Supplemental Analysis concluded that no effects to habitat or endangered or special listed species would occur as a result of the project due to careful monitoring and modification of the drainage pumping program to avoid impacts to habitat.

##### *Cumulative Impacts with the Proposed Action*

The drainage project would result in changes to groundwater levels in the Yuma Valley; the proposed action, however, would not affect this resource, and no cumulative impacts would occur.

#### **4.2.2 Urban Development Projects**

##### ***Emerald River and Associated Townhome Development***

##### *Project Description*

The Emerald River project is an approximately 275-acre development project along the Colorado River in Laughlin, Nevada. The project would include a small hotel, approximately 600 residential units, and a marina in the Laughlin Bay lagoon area. A 43-unit townhome development is associated with this project and would occur on approximately 7 acres.

##### *Project's Environmental Analysis Status and Anticipated Impacts*

Environmental documentation has not been completed for this project. Part of the Major Project process for development will include submittal of a Public Facilities Needs Assessment to address issues such as transportation, flood control, fire and police protection, parks, schools, water, and sewer services. Potential environmental impacts include biological impacts in the lagoon area and construction-related impacts, such as impacts on aesthetics, air quality, hazards (due to the use of hazardous materials during construction), noise, water quality (due to the use of hazardous materials during construction), and geology and soils. Long-term transportation, public services, noise, and aesthetic impacts may also occur.

##### *Cumulative Impacts with the Proposed Action*

Both the proposed action and the Emerald River project would result in construction-related air quality impacts from increased combustive and PM<sub>10</sub> emissions. Combustive emissions from both projects would be mobile and intermittent and would be cumulatively *less than significant*. The proposed action would result in a significant, potentially unavoidable, impact from increased PM<sub>10</sub> emissions, and if construction associated with the proposed action and Emerald River project occurred at the same general time and in the same general location, fugitive dust emissions would be *cumulatively significant*.

Both projects would have the potential for impacts on aquatic, and possibly to terrestrial biological resources, but these would be cumulatively *less than significant* because the impacts of the proposed action would be temporary and localized and would not cause substantial adverse changes to vegetation or wildlife communities along the LCR. The extent to which long-term impacts on biological resources would as a result of the Emerald River project is not known at

this time, but the long-term impacts of the proposed action would be beneficial and would not contribute to a cumulative impact in combination with the development project.

Both projects would result in construction-related short-term disturbances to aesthetics, but these would be *cumulatively less than significant* because they would be temporary and localized. The Emerald River project would result in long-term changes to the visual character of the LCR, but the proposed action would have long-term beneficial aesthetic impacts and would not contribute to a cumulative impact in combination with the development project.

Both projects would result in increased ambient noise levels during construction, but impacts would be *cumulatively less than significant* because noise impacts are highly localized, and impacts would be temporary, lasting only for the duration of the construction. Both the proposed action and the Emerald River project likely would have only minor, short-term, and localized impacts on hazards, geology and soils, and water quality, and the impact would be *cumulatively less than significant*. The proposed action would have only negligible impacts on transportation and public services and would not contribute to a cumulative impact.

#### ***Riverfront Specific Plan #01-0001 and Tract Maps #946 and #947***

##### *Project Description*

The owners of an 80-acre parcel west of the Colorado River, Rio del Sol, LLC and River Estates, are developing 34 residential lots and 9 open space lots. This site is located in Imperial County.

##### *Project's Environmental Analysis Status and Anticipated Impacts*

A Mitigated Negative Declaration was approved in February 2003. The anticipated impacts include less than significant impacts on aesthetics (due to the conversion of existing open space to developed land and the creation of a new source of light and glare); air quality (generation of dust); geology and soils (due to seismic and/or flood hazards and impacts from septic systems); hydrology and water quality (the project would change the flow of Vinagre Wash, resulting in interference with groundwater recharge, and would have water quality impacts); land use and planning (potential conflicts with habitat conservation); noise (increase in ambient noise levels); population and housing (growth inducement); public services (impacts on schools, law enforcement services, and the use of the Colorado River for recreational purposes); and recreation (impacts associated with increased usage of the Colorado River and other facilities).

Potentially significant but mitigable impacts were identified to biological resources (potential impacts on wetlands, and the project may be in southwestern willow flycatcher, Yuma clapper rail, Gila woodpecker, yellow-billed cuckoo, and desert tortoise habitat); cultural resources; hazards and hazardous materials (increased fire hazard); hydrology and water quality (the project lies within a 100-year flood zone and may alter drainage patterns); land use and planning (the proposed project may be located in southwestern willow flycatcher habitat); public services (impacts associated with fire protection); transportation and traffic (increased traffic and fire hazards); and utilities and service systems (due to the construction of new water treatment/storm water drainage facilities and impacts on landfills).

##### Cumulative Impacts with the Proposed Action

Both the proposed action and the Riverfront project would result in construction-related air quality impacts from increased combustive and PM<sub>10</sub> emissions. Combustive emissions from both projects would be mobile and intermittent and would be cumulatively *less than significant*. The proposed action would result in a significant, potentially unavoidable, impact from increased PM<sub>10</sub> emissions, and if construction associated with the proposed action and Riverfront project occurred at the same general time and in the same general location, fugitive dust emissions would be cumulatively *significant*.

Both projects would result in construction-related short-term disturbances to aesthetics, but these would be *cumulatively less than significant* because they would be temporary and localized. The Riverfront project would result in long-term changes to the visual character near the LCR, but the proposed action would have long-term beneficial aesthetic impacts and would not contribute to a cumulative impact in combination with the development project.

Both projects would have the potential for impacts on terrestrial and aquatic biological resources, but these would be cumulatively *less than significant* because the impacts of the proposed action would be temporary and localized and would not cause substantial adverse changes to vegetation or wildlife communities along the LCR. The proposed action would have long-term beneficial impacts on the biological resources that may be impacted by the Riverfront project (i.e., southwestern willow flycatcher, Yuma clapper rail, desert tortoise, Gila woodpecker, and yellow-billed cuckoo) and would not contribute to a cumulative impact in combination with the development project.

Both projects could require the use of hazardous materials. The cumulative impact would be *less than significant* because spills would be small and localized. Additionally, most construction associated with the proposed action would be located in unpopulated areas, and best management practices would be implemented to minimize the potential for accidents to occur. All spills would be cleaned up in accordance with permit conditions. Both projects would result in increased ambient noise levels during construction, but impacts would be considered *cumulatively less than significant* because noise impacts are highly localized, and impacts would be temporary, lasting only for the duration of the construction; moreover, the proposed conservation measures would not be constructed in proximity to a developed area. Cumulative impacts associated with cultural resources would be *significant* since both the proposed action and the Riverfront project would result in significant impacts on this resource.

The minor traffic impacts associated with the proposed action would be localized and would not contribute to a cumulative impact. The proposed action would have less than significant impacts on recreation, and the limited displacement of recreational uses to other areas would not result in the degradation of these areas (a relatively small area would be affected in relationship to the total area available because the planning area contains approximately 423,500 acres of recreational area and a maximum of 8,132 acres would be affected). Moreover, the proposed action would not result in increased population and would not increase the demand for recreational activities. The impact on recreation would be *cumulatively less than significant*.

1 The proposed action would result in minimal impacts on water treatment, storm drainage, and  
2 landfill capacity and would not contribute to a cumulative impact on these resources. The other  
3 impacts associated with the Riverfront project (i.e., on geology and soils, hydrology and water  
4 quality, population and housing, and public services) would not result in cumulative impacts in  
5 combination with the proposed action because the proposed action would not have the same  
6 types of impacts.

#### 7 ***Palo Verde River Properties***

##### 8 *Project Description*

9 The Palo Verde River Properties subdivision project is an 18-parcel subdivision (12 parcels  
10 would be adjacent to the LCR) located in Imperial County. Each of the 18 lots included in the  
11 project would range in size from approximately 0.5 acre to 6 acres, and the total site is 31.7  
12 acres. The intent of the project is to create lots for residential purposes and individual  
13 ownership along the LCR. The project would potentially include the construction of up to 18  
14 wells and would include septic tank leach field systems.

##### 15 *Project's Environmental Analysis Status and Anticipated Impacts*

16 A Mitigated Negative Declaration was completed for this project in 1991. Potential impacts  
17 were identified for the following resources: changes in population distribution; transportation  
18 (increased traffic, etc., associated with a residential area); geology and soils (primarily  
19 construction related); air quality (construction-related and potential odors from septic tanks);  
20 water resources (including changes in drainage patterns, runoff amounts, flow of groundwater  
21 and flood waters, water quality due to contamination from septic tanks, flood hazards, and  
22 water supplies); biological resources (due to clearing/grading activities and the removal of  
23 approximately 30 acres of habitat for wildlife and plants); noise (increased noise levels resulting  
24 from the development and the exposure of people to airport noise); increased light and glare;  
25 land use (conversion of undisturbed land along the LCR); aesthetics (removal of natural  
26 vegetation); hazards and hazardous materials (associated with urban areas and possible  
27 interference with emergency response plans); public services (police and fire protection,  
28 schools, access to LCR recreational areas, increased roadway maintenance, and other public  
29 services); utilities (related to septic tanks, stormwater drainage, and solid waste); human health  
30 (associated with flood hazards and flood detention areas that could be mosquito breeding  
31 grounds that could expose people to encephalitis); recreation (limitation on access to the fish  
32 and wildlife habitat along the LCR); and cultural resources (potential impacts on cultural  
33 resources associated with construction).

##### 34 *Cumulative Impacts with the Proposed Action*

35 Both the proposed action and the Palo Verde River Properties subdivision would result in  
36 construction-related air quality impacts from increased combusive and PM<sub>10</sub> emissions.  
37 Combustive emissions from both projects would be mobile and intermittent and would be  
38 *cumulatively less than significant*. The proposed action would result in a significant, potentially  
39 unavoidable, impact from increased PM<sub>10</sub> emissions, and if construction associated with the  
40 proposed action and subdivision occurred at the same general time and in the same general  
41 location, fugitive dust emissions would be *cumulatively significant*. The proposed action would

not result in odors and would not contribute to a cumulative impact associated with objectionable odors.

Both projects would have the potential for *impacts on* biological resources, but these would be *cumulatively less than significant* because the impacts of the proposed action would be temporary and localized and would not cause substantial adverse changes to vegetation or wildlife communities along the LCR. The subdivision project would result in long-term impacts on biological resources, but the long-term impacts of the proposed action would be beneficial and would not contribute to a cumulative impact in combination with the development project.

Both projects would result in construction-related short-term disturbances to aesthetics, but these would be *cumulatively less than significant* because they would be temporary and localized. The subdivision project would result in long-term changes to the visual character of the LCR, but the proposed action would have long-term beneficial aesthetic impacts and would not contribute to a cumulative impact in combination with the development project.

Both projects would result in increased ambient noise levels during construction, but impacts would be *cumulatively less than significant* because noise impacts are highly localized, and impacts would be temporary, lasting only for the duration of the construction. The proposed action would not affect/change population distributions and would have minor, localized transportation impacts; thus, no cumulative impacts on these resources would occur. Both projects would have only minor, short-term, and localized impacts on geology and soils, and the impact would be *cumulatively less than significant*. The proposed action would not affect the flow of groundwater or floodwaters, and no cumulative impacts would occur. The proposed action would have only minor, short-term, and localized impacts associated with hazardous materials and water quality, and would not likely be implemented near developed areas, and the impact would be *cumulatively less than significant*.

The proposed action would have minor impacts on public services and utilities (i.e., water treatment, storm drainage, water supply, and landfill capacity) from construction and operations, and would not contribute to a cumulative impact. The proposed action would not affect emergency response plans or increase flooding risks, but would have less than significant impacts associated with fires and exposing people to vectors. The proposed action would avoid developed areas, however, and the cumulative impacts associated would be *less than significant*.

The proposed action would have less than significant impacts on recreation, and the limited displacement of recreational uses to other areas would not result in the degradation of these areas (a relatively small area would be affected in relationship to the total area available because the planning area contains approximately 423,500 acres of recreational area and a maximum of 8,132 acres would be affected. Moreover, the Palo Verde River Properties project would affect only a small area (approximately 30 acres). The impact on recreation would be *cumulatively less than significant*.

The proposed action would have significant impacts on cultural resources, and if the Palo Verde River Properties project also affected cultural resources, cumulative impacts could be *cumulatively significant*.

***Blythe Mobile Home Park Solar Power Conversion****Project Description*

The Blythe Mobile Home Park is located adjacent to the Colorado River south of I-10 in the City of Blythe. This project involves the conversion of buildings within the park to solar power. The completion date is scheduled for June 30, 2008 (personal communication, B. Loew 2003).

*Project's Environmental Analysis Status and Anticipated Impacts*

A Negative Declaration was completed for this project and no adverse environmental impacts were identified (personal communication, B. Loew 2003).

*Cumulative Impacts with the Proposed Action*

No cumulative impacts would result because the Blythe Mobile Home Park Solar Power Conversion project would have no adverse environmental impacts.

***Riverview Estates****Project Description*

The Riverview Estates project is located in the City of Blythe along the west bank of the LCR. The project is a phased 79-lot single-family residential subdivision on an approximately 50-acre site. Site grading and public improvements are under construction. In addition to the residential lots, the project would include an open space area (approximately 1 acre) that would consist of a community beach and boat launching dock. The project would also include a sand and oil interceptor to reduce the risk of hazardous waste entering the LCR in drainage waters.

*Project's Environmental Analysis Status and Anticipated Impacts*

A Negative Declaration was completed for this project in January 2000. Less than significant impacts were identified for aesthetics (creation of light or glare); air quality (due to construction and future project-related traffic); hydrology and water quality (alteration of drainage patterns); land use and planning (incompatibility with existing land uses in the vicinity); noise (substantial permanent and temporary/periodic increase in ambient noise levels in the project area); population and housing (growth inducement); public services (fire, police, schools, public services maintenance, and other government services); transportation and circulation (substantial increase in traffic); and utilities and service systems (require or result in the construction of new water, wastewater, or stormwater facilities).

Potentially significant impacts were identified for geology and soils (construction-related erosion); hydrology and water quality (increased runoff); and land use and planning (conflicts with existing zoning or general plan designation).

*Cumulative Impacts with the Proposed Action*

Cumulative construction-related impacts would not occur because the Riverview Estates project is currently under construction and would likely be completed before construction of LCR

MSCP construction projects would begin. The proposed action would not result in an increase in light and glare, would not be growth-inducing, would not affect drainage patterns, and would have only minimal traffic and public services and utilities impacts (including runoff/storm drainage); thus, cumulative impacts would not occur in combination with the proposed action. The proposed action would generally be considered a permitted use in the undeveloped and agricultural areas where it would occur, and the zoning of each potential conservation project site would be reviewed to minimize any potential land use conflicts. Thus, cumulative impacts on land use and planning would be *less than significant*.

#### **Palo Verde Oasis**

##### *Project Description*

The Palo Verde Oasis project is a 29-unit single-family residential development located in the City of Blythe. This portion of the project is the final phase of a 106-unit single-family residential development and is currently in the pre-construction phase.

##### *Project's Environmental Analysis Status and Anticipated Impacts*

A Negative Declaration was completed for the complete 106-unit project in June of 1996. Less than significant impacts were identified for noise (exposure of people to I-10 noise due to the proximity of the residential development I-10), and utilities and service systems (increased need for water treatment/sewer systems).

##### *Cumulative Impacts with the Proposed Action*

Both the proposed action and the Palo Verde Oasis subdivision would result in construction-related air quality impacts from increased combustive and PM<sub>10</sub> emissions. Combustive emissions from both projects would be mobile and intermittent and would be cumulatively *less than significant*. The proposed action would result in a significant, potentially unavoidable, impact from increased PM<sub>10</sub> emissions, and if construction associated with the proposed action and subdivision occurred at the same general time and in the same general location, fugitive dust emissions would be cumulatively *significant*.

Both projects would result in increased ambient noise levels during construction, but impacts would be *cumulatively less than significant* because noise impacts are highly localized, and impacts would be temporary, lasting only for the duration of the construction. Moreover, the proposed action would avoid developed areas like the subdivision site. Cumulative impacts on utilities and service systems would not occur because the water use for the proposed action would be associated primarily with irrigation and would not require treatment. The two potential field facilities associated with the proposed action would require only minimal potable water use and therefore would not require the construction of new water treatment facilities or the expansion of existing facilities. The proposed action would also not generate wastewater except at the two potential field facilities, which would generate only minimal amounts. Thus, no cumulative impacts on existing wastewater conveyance and treatment facilities would occur.

## 1 *Mayflower Park Improvements and Expansion*

### 2 *Project Description*

3 The Mayflower Park Improvements and Expansion project will be located in an unincorporated  
4 area approximately 4 miles north of the City of Blythe. The project includes a total of 12  
5 individual projects, including planning and development of the park expansion site,  
6 infrastructure improvements, lagoon improvements, and construction of new recreational  
7 buildings and restrooms on an approximately 85-acre site (of which approximately 65 acres  
8 have been purchased for the expansion). All individual projects are expected to be completed  
9 in 2008 (personal communication, B. Loew 2003).

### 10 *Project's Environmental Analysis Status and Anticipated Impacts*

11 A Mitigated Negative Declaration has been completed for this project. Anticipated environ-  
12 mental impacts include less than significant impacts on aesthetics (introduction of new sources  
13 of nighttime light to the area) and agricultural resources (conversion of 65 acres of Prime  
14 Farmland). Potentially significant but mitigable impacts were identified for geology and soils  
15 (liquefaction and subsidence hazards).

### 16 *Cumulative Impacts with the Proposed Action*

17 Both the proposed action and the Mayflower Park project would result in construction-related  
18 air quality impacts from increased combustive and PM<sub>10</sub> emissions. Combustive emissions  
19 from both projects would be mobile and intermittent and would be cumulatively *less than*  
20 *significant*. The proposed action would result in a significant, potentially unavoidable, impact  
21 from increased PM<sub>10</sub> emissions, and if construction associated with the proposed action and  
22 Mayflower Park project occurred at the same general time and in the same general location,  
23 fugitive dust emissions would be cumulatively *significant*.

24 Both projects would result in construction-related short-term disturbances to aesthetics, but  
25 these would be *cumulatively less than significant* because they would be temporary and localized.  
26 The subdivision project would result in long-term changes to the visual character of the LCR,  
27 but the proposed action would have long-term beneficial aesthetic impacts and would not  
28 contribute to a cumulative impact in combination with the development project.

29 Both projects would result in the conversion of Important Farmland, but impacts would be  
30 *cumulatively less than significant* since the total amount that could be affected is not substantial  
31 compared to the overall amount available in the planning area (i.e., approximately 3.7 percent  
32 of the total Important Farmland in the planning area could be affected by the two projects). The  
33 proposed action would not result in liquefaction or subsidence impacts; therefore, no  
34 cumulative impacts would occur. No other common resources would be affected by the  
35 implementation of the proposed action and the Mayflower Park Improvements and Expansion  
36 project and, therefore, no other cumulative impacts would occur.

##### **Queshan Park Improvements**

###### *Project Description*

Queshan Park is located adjacent to the Colorado River just north of I-10 in the City of Blythe. This project includes the planning, design, and construction of improvements including a boat launch, RV parking, new campsites, limited boat slips, restaurant, and lagoon improvements. The project schedule is not finalized.

###### *Project's Environmental Analysis Status and Anticipated Impacts*

The City of Blythe is the lead agency and has not yet conducted CEQA analysis on this project; therefore, the project's impacts have not been identified (personal communication, B. Loew 2003). It is anticipated that the project could result in impacts on aesthetics, air quality, water quality, biological resources, hazards related to construction activity, and geology and soils.

###### *Cumulative Impacts with the Proposed Action*

Both the proposed action and the Queshan Park project would result in construction-related air quality impacts from increased combustive and PM<sub>10</sub> emissions. Combustive emissions from both projects would be mobile and intermittent and would be cumulatively *less than significant*. The proposed action would result in a significant, potentially unavoidable, impact from increased PM<sub>10</sub> emissions, and if construction associated with the proposed action and Queshan Park project occurred at the same general time and in the same general location, fugitive dust emissions would be cumulatively *significant*.

The extent to which the Queshan project could affect biological resources is not known, but it is assumed it would have the potential for such impacts. Short-term impacts would be *cumulatively less than significant* because the impacts of the proposed action would be temporary and localized and would not cause substantial adverse changes to vegetation or wildlife communities along the LCR. The Queshan project could result in long-term impacts on biological resources, but the long-term impacts of the proposed action would be beneficial and would not contribute to a cumulative impact in combination with the development project.

Both projects could result in construction-related short-term disturbances to aesthetics, but these would be *cumulatively less than significant* because they would be temporary and localized. The Queshan project could result in long-term changes to the visual character of the LCR, but the proposed action would have long-term beneficial aesthetic impacts and would not contribute to a cumulative impact in combination with the development project. Both projects likely would have only minor, short-term, and localized impacts on geology and soils, hazards, and water quality, and the cumulative impact would be *less than significant*.

##### **Needles Highway Improvement Project**

###### *Project Description*

The Needles Highway Improvement Project, which is under the jurisdiction of Caltrans (District 8-San Bernardino County), would improve the highway pavement and add passing lanes,

1 thereby reducing accidents caused by traffic congestion. The project would include horizontal  
2 and vertical alignment changes, including possibly bypassing a section of roadway with a  
3 separate alignment; pavement widening; passing lanes; left turn pockets as needed; shoulder  
4 widening; and pavement rehabilitation at various locations. Right-of-way would be acquired to  
5 achieve the engineered design. The comprehensive project is the complete reconstruction of 20  
6 miles of the Needles Highway from Needles, California, to Laughlin, Nevada with a right-of-  
7 way of approximately 300 feet in width. Thus, the project area would encompass  
8 approximately 730 acres.

#### 9 *Project's Environmental Analysis Status and Anticipated Impacts*

10 A draft preliminary environmental study has been prepared, as well as a draft study  
11 methodology and outline. The latest project schedule shows the completion of environmental  
12 documentation in December 2004. Depending on the alignment chosen, impacts on biological  
13 and cultural resources may occur. Biological resources that may be present in the study area  
14 include the Mojave desert tortoise, the Arizona bill's vireo, elf owl, yellow-breasted chat,  
15 Sonoran yellow warbler, Crissal thrasher, prairie falcon, Le Conte's thrasher, burrowing owls,  
16 and desert mesquite vegetation. Although the amount of habitat for each species that would be  
17 impacted has not yet been determined, the project is not expected to affect these habitats in the  
18 entire project area (personal communication, D. Clark 2004). Additionally, the preliminary  
19 environmental study has identified the potential to disrupt agricultural activities on the Fort  
20 Mojave Indian Reservation, although no Important Farmland is expected to be affected. Other  
21 anticipated impacts could include construction-related impacts such as impacts on aesthetics,  
22 air quality, water quality, hazards related to construction activity, and geology and soils.  
23 Additionally, traffic impacts during construction would be expected.

#### 24 *Cumulative Impacts with the Proposed Action*

25 Both the proposed action and the Needles Highway Improvement project would result in  
26 construction-related air quality impacts from increased combustive and PM<sub>10</sub> emissions.  
27 Combustive emissions from both projects would be mobile and intermittent and would be  
28 cumulatively *less than significant*. The proposed action would result in a significant, potentially  
29 unavoidable impact, from increased PM<sub>10</sub> emissions, and if construction associated with the  
30 proposed action and highway improvement project occurred at the same general time and in  
31 the same general location, fugitive dust emissions would be cumulatively *significant*.

32 Both projects would have the potential for construction-related impacts on biological resources,  
33 but these would be *cumulatively less than significant* because the impacts would be temporary  
34 and localized and would not cause substantial adverse changes to vegetation or wildlife  
35 communities along the LCR. Both projects could result in construction-related short-term  
36 disturbances to aesthetics, but these would be *cumulatively less than significant* because they  
37 would be temporary and localized.

38 Both the proposed action and the highway improvement project would have only minor, short-  
39 term, and localized impacts on geology and soils, hazards, and water quality, and the  
40 cumulative impact would be *less than significant*. Both projects could result in significant  
41 impacts on cultural resources and the impact would, therefore, also be *cumulatively significant*.  
42 Cumulative impacts on agricultural resources would be *cumulatively less than significant* because

the highway improvement project would not result in the conversion of Important Farmland in to nonagricultural use, although it could result in some disturbance agricultural activities. The proposed action would result in only minor, localized transportation impacts would not contribute to a cumulative impact in combination with the highway improvement project.

#### **Gateway Park**

##### *Project Description*

Gateway Park is a planned recreation and historic interpretive park located in the Yuma area. The project includes 20 acres of recreational and historic interpretative park improvements using native vegetation. The project is anticipated to begin in December 2004 and completion is anticipated in December 2005. The park will use only native vegetation that should provide ancillary habitat for listed or unlisted species.

##### *Project's Environmental Analysis Status and Anticipated Impacts*

No environmental documentation has been completed for this project; however, no impacts are anticipated. Project-related improvements would occur above the ordinary high water mark and, therefore, no impacts would occur to wetlands (personal communication, M. Spriggs 2003).

##### *Cumulative Impacts with the Proposed Action*

No cumulative impacts would result from the Gateway Park project and the proposed action because no adverse impacts were identified for the Gateway Park project and it would be completed before the onset of construction activities associated with the proposed action.

#### **Replacement of the Somerton Wastewater Treatment Facility**

##### *Project Description*

The City of Somerton, Arizona is proposing to reconstruct the existing Wastewater Treatment Plant (WWTP), which is currently unable to adequately treat wastewater and has experienced recurrent NPDES permit violations. The project is also necessary to alleviate existing adverse environmental effects associated with the Somerton WWTP, which include the generation of offensive odors, and risks to human health and safety. The proposed treatment units are being designed at 0.8 million gallons per day (mgd), which allow for a 30 percent increase in flows over current conditions. However, to allow for future expansion, the headworks, pump station, and outfall will be built for approximately 1.4 mgd. Construction is scheduled to begin the first quarter of 2004 and startup of the new WWTP is anticipated for the first quarter of 2005. The project site is approximately 15 acres.

##### *Project's Environmental Analysis Status and Anticipated Impacts*

The EPA has prepared an Environmental Assessment (EA), in compliance with NEPA, that examined the potential environmental impacts of the proposed action in the United States, as well as the transboundary impacts that might occur in Mexico. The EA did not identify any significant impacts on the environment that would result from the implementation of the project. Less than significant impacts included minor impacts on wildlife due to the removal of

1 lagoons that would eliminate bird resting areas; temporary construction-related noise impacts;  
2 aesthetic impacts due to the construction of tanks; minor environmental justice impacts  
3 associated with increased noise levels during construction; minor increases in energy use; and  
4 minor indirect impacts relating to the support of growth.

5 *Cumulative Impacts with the Proposed Action*

6 No cumulative construction-related impacts would occur because construction of the WWTP  
7 would be completed prior to the onset of construction of the LCR MSCP conservation projects.  
8 The WWTP project would have long-term, less than significant impacts on aesthetics from new  
9 facilities, as well as from increased energy use during operations. It also would have indirect  
10 impacts associated with population growth. The proposed action would have beneficial long-  
11 term impacts on aesthetics, would have minimal energy demands, and would not result in  
12 population growth; thus, no cumulative impacts on these resources would occur.

13 ***Bullhead City Development Projects***

14 *Project Description*

15 Between 90 and 100 platted and proposed residential, commercial, and other development  
16 projects could be constructed in Bullhead City, Arizona.

17 *Project's Environmental Analysis Status and Anticipated Impacts*

18 Environmental documentation for these projects has not been completed. Anticipated impacts  
19 of these projects include construction-related impacts such as impacts on aesthetics, biological  
20 resources, air quality, hazards (due to the use of hazardous materials during construction),  
21 water quality (due to the use of hazardous materials during construction), and geology and  
22 soils. Long-term aesthetic impacts may also occur.

23 *Cumulative Impacts with the Proposed Action*

24 Both the proposed action and the Bullhead City projects would result in construction-related air  
25 quality impacts from increased combustive and PM<sub>10</sub> emissions. Combustive emissions from  
26 both projects would be mobile and intermittent and would be *cumulatively less than significant*.  
27 The proposed action would result in a significant, potentially unavoidable, impact from  
28 increased PM<sub>10</sub> emissions, and if construction associated with the proposed action and  
29 development projects occurred at the same general time and in the same general location,  
30 fugitive dust emissions would be *cumulatively significant*.

31 The extent to which the Bullhead City projects could affect biological resources is not known,  
32 but it is assumed that they would have some adverse impacts. Short-term construction-related  
33 would be *cumulatively less than significant* because the impacts of the proposed action would be  
34 temporary and localized and would not cause substantial adverse changes to vegetation or  
35 wildlife communities along the LCR. The Bullhead City projects could result in long-term  
36 impacts on biological resources, but the long-term impacts of the proposed action would be  
37 beneficial and would not contribute to a cumulative impact in combination with the  
38 development projects.

Both the proposed action and the Bullhead City projects could result in construction-related short-term disturbances to aesthetics, but these would be *cumulatively less than significant* because they would be temporary and localized. The Bullhead City projects could result in long-term changes to the visual character of the LCR, but the proposed action would have long-term beneficial aesthetic impacts and would not contribute to a cumulative impact in combination with the development projects.

The proposed action and Bullhead City projects likely would have only minor, short-term, and localized impacts on hazards, geology and soils, and water quality, and the impact would be *cumulatively less than significant*.

#### 4.2.3 Habitat Enhancement Projects

##### *Mittry Lake Emergency Stabilization and Rehabilitation*

###### *Project Description*

This project is an emergency stabilization and rehabilitation effort on approximately 475 acres of BLM-administered lands located within the Mittry Lake Wildlife Area, which is being undertaken in response to disturbance caused by the Mittry Lake Fire that occurred in March 2003. All efforts would occur within Yuma County, Arizona. The proposed rehabilitation includes mechanical clearing, mulching, grubbing, planting, caging, fertilizing, pruning and seeding, irrigation, herbicide application, soil analysis, and California black rail habitat improvement. The purpose of this project is to re-establish stands of cottonwood, willow, and mesquite.

###### *Project's Environmental Analysis Status and Anticipated Impacts*

A Decision Record (BLMYFO 2003a) for this project was signed in July 2003 by the BLMYFO, and is supported with the Mittry Lake Emergency Stabilization and Rehabilitation EA (BLMYFO 2003b) and Finding of No Significant Impact. The EA determined that the project would have limited impacts on recreational resources due to temporary restricted access to recreational areas (although long-term impacts would be beneficial); air quality (construction-related emissions); aesthetics (short-term, construction-related degradation of visual quality); biological resources (temporary disturbance from construction activities); water quality (increased nutrient loading to Mittry Lake); and geology and soils (erosion impacts).

###### *Cumulative Impacts with the Proposed Action*

Both the proposed action and the Mittry Lake project would result in construction-related air quality impacts from increased combustive and PM<sub>10</sub> emissions. Combustive emissions from both projects would be mobile and intermittent and would be *cumulatively less than significant*. The proposed action would result in a significant, potentially unavoidable, impact from increased PM<sub>10</sub> emissions, and if construction associated with the proposed action and Mittry Lake project occurred at the same general time and in the same general location, fugitive dust emissions would be *cumulatively significant*.

Both projects would result in construction-related short-term disturbances to aesthetics, but these would be *cumulatively less than significant* because they would be temporary and localized. Both projects would have long-term beneficial aesthetic impacts through the creation or restoration of a combined total of 8,607 acres of land cover types dominated by native vegetation; thus, the long-term impacts would be *cumulatively beneficial*.

Both projects would have the potential for construction-related impacts on biological resources, but these would be *cumulatively less than significant* because the impacts would be temporary and localized and would not cause substantial adverse changes to vegetation or wildlife communities along the LCR. Both projects would have long-term beneficial impacts on biological resources through the creation or restoration of a combined total of 8,607 acres of land cover types that provide habitat for covered and non-covered species; thus, the long-term impacts would be *cumulatively beneficial*.

Both the proposed action and Mittry Lake project would have only minor, short-term, and localized impacts on water quality and geology and soils, and the impact would be *cumulatively less than significant*. The proposed action would result in the loss of access to recreational uses, but the amount of recreational area that could be removed from public use is small in comparison to the area available. The recreational impacts associated with the Mittry Lake project would be temporary, and it would have long-term beneficial impacts on recreational resources. Therefore, impacts would be *cumulatively less than significant*.

#### ***Mittry Lake Hazardous Fuels Reduction and Riparian Restoration***

##### *Project Description*

The BLMYFO is proposing to restore riparian plant communities along the LCR on selected sites deemed suitable for intensive revegetation. Approximately 80 acres of land would be revegetated with native plants following removal of saltcedar at the south end of Mittry Lake. This project is being proposed to improve wildlife species diversity, encourage wildlife species numbers, increase habitat complexity, and reduce the amount of hazardous fuels in the project area.

##### *Project's Environmental Analysis Status and Anticipated Impacts*

An EA was completed for this project in December 2002. The EA determined that minor impacts on air quality (increased PM<sub>10</sub> and construction-related emissions for a period of approximately 1 month), aesthetics (due to the clearing of land resulting in patchy topography), and water quality (nutrient loading to Mittry Lake) would result from the Mittry Lake Hazardous Fuels Reduction and Riparian Restoration project.

##### *Cumulative Impacts with the Proposed Action*

Both the proposed action and the Mittry Lake project would result in construction-related air quality impacts from increased combustive and PM<sub>10</sub> emissions. Combustive emissions from both projects would be mobile and intermittent and would be *cumulatively less than significant*. The proposed action would result in a significant, potentially unavoidable, impact from increased PM<sub>10</sub> emissions, and if construction associated with the proposed action and Mittry

Lake project occurred at the same general time and in the same general location, fugitive dust emissions would be cumulatively *significant*.

Both projects would result in construction-related short-term disturbances to aesthetics, but these would be *cumulatively less than significant* because they would be temporary and localized. Both projects would have long-term beneficial aesthetic impacts through the creation or restoration of a combined total of 8,212 acres of native land cover types; thus, the long-term impacts would be *cumulatively beneficial*.

Both projects would have the potential for construction-related impacts on biological resources, but these would be *cumulatively less than significant* because the impacts would be temporary and localized and would not cause substantial adverse changes to vegetation or wildlife communities along the LCR. Both projects would have long-term beneficial impacts on biological resources through the creation or restoration of a combined total of 8,212 acres of land cover types that provide habitat for covered and non-covered species; thus, the long-term impacts would be *cumulatively beneficial*.

Both the proposed action and Mittry Lake project would have only minor, short-term, and localized impacts on water quality and geology and soils, and the impact would be *cumulatively less than significant*.

#### **Yuma East Wetlands Restoration Project**

##### *Project Description*

The Yuma East Wetlands Restoration Project (YEW) is a 1,400-acre native riparian and river restoration project that is centered on the restoration of habitat for wetland-associated species through the re-opening of historic channels and sloughs, clearing of non-native species, and revegetation of the area with native plants and trees. A formal plan was completed in July of 2001 for the area by the Quechan Indian Nation, the City of Yuma, and the Yuma Crossing National Heritage Area acting as the lead entities. The project is scheduled to begin in winter 2003, and completed, depending on funding, between 2008-2013.

##### *Project's Environmental Analysis Status and Anticipated Impacts*

A Section 404 permit has been issued by the Corps of Engineers for the YEW project. The project could result in the conversion of approximately 400 acres of agricultural land to native vegetation and would have construction-related impacts on air quality. Currently, the owners of an 80-acre cultivated area and the owners of a 200-acre area within the project boundary are in the process of considering if these lands may be included in the restoration effort. It is anticipated that these lands will be included; however, owner agreement is still pending. No determination has been made whether the agricultural land that would be converted to wetlands is Important Farmland.

##### *Cumulative Impacts with the Proposed Action*

Both the proposed action and the YEW project would result in construction-related air quality impacts from increased combusive and PM<sub>10</sub> emissions. Combustive emissions from both

1 projects would be mobile and intermittent and would be cumulatively *less than significant*. The  
2 proposed action would result in a significant, potentially unavoidable, impact from increased  
3 PM<sub>10</sub> emissions, and if construction associated with the proposed action and YEW project  
4 occurred at the same general time and in the same general location, fugitive dust emissions  
5 would be *cumulatively significant*.

6 The proposed action has the potential to convert Important Farmland to native vegetation, as  
7 could the YEW project. It is not known if the YEW project would convert Important Farmland,  
8 but even if it were, the impact would be *cumulatively less than significant* because the total  
9 amount that could be affected is not substantial compared to the overall amount available in the  
10 planning area (i.e., approximately 3.8 percent of the total Important Farmland in the planning  
11 area could be affected by the two projects).

12 The implementation of both projects would result in long-term, *cumulatively beneficial* impacts  
13 on aesthetics and biological resources since both would create or restore native vegetation.

#### 14 ***Yuma West Wetlands***

##### 15 *Project Description*

16 The Yuma West Wetlands (YWW) is a 110-acre former landfill and includes another 35 acres of  
17 wetland restoration through the removal of exotic plant species and revegetation with native  
18 plants and trees on the lower bench within jurisdictional Waters of the U.S. YWW has received  
19 its Section 404 permit and 25 acres of the lower bench has been revegetated. Ongoing  
20 monitoring and additional revegetation will occur within the project area. The remaining 10  
21 acres of revegetation is expected to begin construction in winter 2003 or late summer 2004  
22 depending upon the timing of migration season and project timing. Landfill conversion to a  
23 recreational park will be completed in 2007 and the revegetation, depending on funding, will be  
24 complete in 2005.

##### 25 *Project's Environmental Analysis Status and Anticipated Impacts*

26 An EA was completed for the YWW project that identified potential beneficial impacts on  
27 aesthetics, recreation, socioeconomics, wildlife habitat, and wetlands. Potential adverse impacts  
28 (the level of significance of these impacts was not specifically identified) included temporary  
29 construction-related air quality impacts, including fugitive dust emissions (these impacts would  
30 be minimized by spraying water on disturbed areas) and exhaust from construction  
31 equipment/vehicles; groundwater impacts due to fuels and other construction-related  
32 contaminants leaching into groundwater (a spill response plan would minimize potential  
33 impacts); surface water impacts due to sedimentation during construction activities (these  
34 impacts would be minimized by complying with permit requirements); temporary  
35 displacement of wildlife during construction; potential but unlikely impacts on the  
36 southwestern willow flycatcher due to disruption of habitat; and limited socioeconomic impacts  
37 related to air quality, noise, and traffic.

##### *Cumulative Impacts with the Proposed Action*

No adverse cumulative impacts with the proposed action would result because construction periods would not likely overlap and all adverse impacts associated with the YWW project are construction-related. The implementation of both projects would result in long-term, *cumulatively beneficial* impacts on aesthetics and biological resources since both would create or restore native vegetation, and the YWW would convert a landfill to a park.

##### *Clark County Multiple Species Habitat Conservation Plan*

###### *Project Description*

Clark County, Nevada, has prepared an MSHCP to conserve a wide variety of species and their habitats throughout the county. The MSHCP is an extension of the effort begun with the Clark County Desert Conservation Plan (DCP), which was prepared in response to the Federal listing of the desert tortoise as a threatened species. Whereas the DCP focused primarily on the conservation of the desert tortoise, the MSHCP was prepared to establish a means to address the conservation needs of the entire range of biological resources within Clark County. The provisions of the DCP have been integrated into the MSHCP and supersede the provisions of the DCP.

The MSHCP was prepared pursuant to section 10(a) of the ESA, as amended. It identifies those actions necessary to maintain the viability of natural habitats in the county for approximately 232 species residing in those habitats. While the MSHCP addresses all 232 species, it proposes that 79 of these species be covered by a section 10(a)(1)(B) permit for those species that are currently listed and Prelisting Agreements for those species that are not listed (covered species). Among the 79 covered species are the southwestern willow flycatcher (*Empidonax traillii extimus*); Mojave desert tortoise (*Gopherus agassizii*); and blue diamond cholla (*Opuntia whipplei* var. *multigeniculata*). All covered species are treated as though they were listed and are subject to the standards set forth in section 10(a)(1)(B) of the ESA and 50 C.F.R. 17.32(b) and 17.22(b).

###### *Project's Environmental Analysis Status and Anticipated Impacts*

The Final MSHCP and accompanying EIS were issued by the Clark County Department of Comprehensive Planning and the Service in September 2000. The Service subsequently issued a 30-year permit authorizing the incidental take of the listed species covered by the plan. The EIS concluded that the MSHCP would have impacts on recreation, mineral extraction, transportation, and utility rights-of-way.

##### *Cumulative Impacts with the Proposed Action*

The proposed action would have either no impacts or less than significant impacts on most resources affected by the Clark County MSHCP. Impacts on recreation would be *cumulatively less than significant* because the total area affected would be small in comparison to the total recreational area available in the planning area (approximately 423,500 acres). Both projects would have an overall beneficial impact on aesthetic and biological resources since they are designed to establish or conserve native vegetation; therefore, a *cumulatively beneficial* impact would result from their implementation.

## **Cocopah Tribe River Restoration Project**

### *Project Description*

The Cocopah Tribe River Restoration Project is currently in the conceptual phase and therefore does not have a well-defined project description. The project would involve saltcedar eradication and replanting with honey mesquite and cottonwood-willow.

### *Project's Environmental Analysis Status and Anticipated Impacts*

It is anticipated that this restoration project would have long-term beneficial impacts on aesthetics and biological resources. Vegetation removal and replanting activities would likely result in similar impacts as the proposed action, including impacts on aesthetics, biological resources, air quality, hydrology, geology and soils, cultural resources, and noise.

### *Cumulative Impacts with the Proposed Action*

Both the proposed action and the tribal restoration project would result in construction-related air quality impacts from increased combustive and PM<sub>10</sub> emissions. Combustive emissions from both projects would be mobile and intermittent and would be cumulatively *less than significant*. The proposed action would result in a significant, potentially unavoidable, impact from increased PM<sub>10</sub> emissions, and if construction associated with the proposed action and tribal restoration project occurred at the same general time and in the same general location, fugitive dust emissions would be cumulatively *significant*.

Both projects would have the potential for construction-related impacts on biological resources, but these would be *cumulatively less than significant* because the impacts would be temporary and localized and would not cause substantial adverse changes to vegetation or wildlife communities along the LCR. Both projects would have long-term beneficial impacts on biological resources through the establishment of native vegetation; thus, the long-term impacts would be *cumulatively beneficial*.

Both projects would result in construction-related short-term disturbances to aesthetic resources, but these would be *cumulatively less than significant* since they would be temporary and localized. The implementation of both projects would result in long-term, *cumulatively beneficial* impacts on aesthetics since both would establish native vegetation.

Cumulative impacts on cultural resources could be *cumulatively significant* because construction associated with both actions could affect significant cultural resources. All other cumulative impacts on the resources identified above would be *less than significant* since impacts would be short-term and localized.

## **4.2.4 Other Conservation and Restoration Projects**

A number of conservation and restoration projects are ongoing within the planning area. These include ongoing razorback sucker and bonytail conservation including the Native Fish Work Group projects and improvements to Willow Beach National Fish Hatchery, among others. The impact on biological resources from the implementation of the proposed action in combination

with these other restoration projects would be *cumulatively beneficial*. *Cumulatively less than significant*, localized, construction-related impacts may occur associated with dredging activities.

#### 4.2.5 Other Projects

##### ***Land Management, Crop Rotation, and Water Supply Program in the Palo Verde Irrigation District***

###### *Project Description*

Metropolitan and the PVID are developing a land management, crop rotation, and water supply program in the Palo Verde Valley. The program's objective is to develop a flexible and reliable water supply for Metropolitan of approximately 111,000 AFY for 35 years and to assist in stabilizing the farm economy within the Palo Verde Valley through sign-up payments and annual payments for participating farmers and through implementation of specific community improvement programs. Participation in the program would be voluntary. Participating farmers would, at Metropolitan's request and with specific notice periods, not irrigate a portion of their farmland. The same land would not be irrigated for a minimum of a 1-year term and a maximum of a 3-year term at the farmer's option. A base load area of 6,000 acres would not be irrigated each year of the 35 years. Metropolitan would have the option to increase the non-irrigated area from 6,000 acres up to a maximum of 26,500 acres. Overall, a maximum of 24,000 acres in any 25-year period or 26,500 acres in any 10-year period during the 35-year program would be dedicated to the program. Metropolitan would provide financial compensation to the participating farmers. Not irrigating a portion of the Palo Verde Valley's farmland would result in less Colorado River water being used by PVID. The amount of water conserved by the program would be determined on an annual basis by a verification committee composed of Metropolitan, PVID, and Reclamation and made available for diversion by Metropolitan at Lake Havasu through the CRA.

###### *Project's Environmental Analysis Status and Anticipated Impacts*

A Final EIR was completed for this project in September 2002 that focused on five environmental resource areas: agricultural resources, geology and soils, air quality, hydrology and water quality, and biological resources. No impacts on air quality would occur, nor would the project convert farmland to other uses. The following less than significant impacts were identified: erosion-related impacts; decreases in groundwater levels; reduced flow in some areas of the LCR; agricultural impacts due to a reduction in the amount of farmland being irrigated at any one time; and indirect impacts on biological resources that forage in agricultural areas.

###### *Cumulative Impacts with the Proposed Action*

Erosion-related impacts for both projects would be temporary, localized, and *cumulatively less than significant*. The proposed action would not decrease groundwater levels or affect river flow; thus, no cumulative impacts on hydrology or biological resources from such changes would occur. The PVID project would result in less than significant impacts on agriculture due to a reduction in the amount of farmland being irrigated at any one time. The proposed action

could result in the conversion of Important Farmland to other land cover types; however, impacts on agricultural resources would be *cumulatively less than significant* because the PVID project would not convert farmland to non-agricultural use, and the proposed action would affect only a small percentage of the agricultural land along the LCR. Impacts on biological resources would be *cumulatively less than significant*. The PVID project would have a less than significant impact on species that forage and winter on agricultural lands due to changes in irrigation and crop-planting regimes, and the proposed action would have temporary, less than significant impacts on these species due to the conversion of this land to native land cover types. The establishment of additional native land cover types would allow population expansion for these species, however, which is a long-term beneficial impact.

### *All-American Canal Lining Project*

#### *Project Description*

Lining the All-American Canal was authorized by Title II of Public Law 100-675, dated January 25, 1988. This Act authorized the Secretary to construct a new lined canal or to line the previously unlined portions of the All-American Canal to reduce seepage of water. Title II authorizes the Secretary to determine the amount of water conserved by this canal lining. The Act further directs that the water so conserved be made available for consumptive use by California contractors within their service areas according to their priority under the Seven-Party Agreement. The preferred project alternative for controlling seepage from the AAC (constructing a parallel canal) would reduce seepage by approximately 67.7 kafy.

#### *Project's Environmental Analysis Status and Anticipated Impacts*

A Final EIS/EIR for the All-American Canal Lining Project was released in March 1994. Environmental impacts were identified in the following areas: groundwater, water quality in Mexico, biological resources (wetlands including wetlands along the canal and along the impacted reach of the Colorado River, terrestrial plant communities and associated wildlife, and special status species), canal fisheries, air quality, cultural resources, hydroelectric power, and recreation (USBR and IID 1994). A variety of mitigation measures have been incorporated into the project, including establishing 43 acres of honey mesquite and cottonwood/willow and 1 acre of marsh, restoring shelter for juvenile fish by constructing artificial reefs in the canal, replacing and protecting habitat for special status species and to help maintain the fishery for recreational fishing, and avoiding cultural resources sites where feasible.

A ROD was prepared and signed by the Lower Colorado Region's Regional Director on July 29, 1994. On November 22, 1999, Reclamation determined that the EIS and ROD continued to meet the requirements of NEPA.

#### *Cumulative Impacts with the Proposed Action*

Only a small segment of the canal-lining project would occur in the planning area, and air quality from construction is the only resource that would potentially contribute to a cumulative impact. Both the proposed action and the canal-lining project would result in construction-related air quality impacts from increased combustive and PM<sub>10</sub> emissions. Combustive emissions from both projects would be mobile and intermittent and would be cumulatively *less*

than significant. The proposed action would result in a significant, potentially unavoidable, impact from increased PM<sub>10</sub> emissions, and if construction associated with the proposed action and canal-lining project occurred at the same general time and in the same general location, fugitive dust emissions would be cumulatively significant.

#### ***Lower Colorado River Boundary and Capacity Preservation Project***

##### *Project Description*

The Lower Colorado River Boundary and Capacity Preservation Project is proposed by the USIBWC. The project is located along the Limitrophe Division of the Colorado River, the 23.7 mile "international segment" of the Colorado River. This portion of the river serves as the border between the United States (State of Arizona) and Mexico (State of Baja California del Norte). The study area begins west of Yuma, Arizona, at the NIB, the northernmost point where the river begins to serve as the international boundary and continues south to the SIB, just west of San Luis, Arizona, where the Colorado River flows south into Mexico. The study area includes Morelos Diversion Dam, which is south of the NIB. The project would include measures to preserve and stabilize the international boundary and improve flood control of the channel, as well as long-term operations and maintenance activities. The project may also include clearing a 100-foot wide path upstream and downstream of the centerline of the cable on the United States side of the cable crossing approximately 1.1 mile upstream of Morelos Diversion Dam. This would affect 72,000 square feet in the United States.

##### *Project's Environmental Analysis Status and Anticipated Impacts*

The Draft EIS for this project is expected to be completed by early 2005. The USIBWC, assisted by the Corps, is preparing the EIS and will evaluate specific options for three related actions:

- The preservation and stability of the international boundary between the U.S. and Mexico.
- Enhancement of the channel's carrying capacity so it provides flood carrying capacity of 140,000 cfs and a pilot channel with a capacity of 15,000 cfs.
- Maintenance activities to ensure that channel capacity and boundary stability are retained in the future.

In addition to the required "no action alternative," the EIS will evaluate four alternatives that incorporate various pilot channel routes and designs between the levees, each of which would become the new international boundary and provide the required flood protection. Alternatives will also consider raising the levees in certain locations along the Limitrophe Division.

The environmental impacts of the project may include loss of vegetation and associated wildlife habitat between the river levees as a result of clearing for the pilot channel. The extent of that impact will depend on the actual route of the channel, which is now being developed. Other impacts could include air quality impacts since the project construction area is located in a PM<sub>10</sub> non-attainment area and the project would include a significant amount of construction, and other construction-related impacts on aesthetics, hazards, geology and soils, and water quality.

1 *Cumulative Impacts with the Proposed Action*

2 Both the proposed action and the USIBWC project would result in construction-related air  
3 quality impacts from increased combustive and PM<sub>10</sub> emissions. Combustive emissions from  
4 both projects would be mobile and intermittent and would be cumulatively less than  
5 significant. The proposed action would result in a significant, potentially unavoidable, impact  
6 from increased PM<sub>10</sub> emissions, and if construction associated with the proposed action and  
7 IBWC project occurred at the same general time and in the same general location, fugitive dust  
8 emissions would be cumulatively *significant*.

9 Both projects would have the potential for impacts on aquatic and terrestrial biological  
10 resources, but these would be cumulatively *less than significant* because the impacts of the  
11 proposed action would be temporary and localized and would not cause substantial adverse  
12 changes to vegetation or wildlife communities along the LCR. The extent to which long-term  
13 impacts on biological resources would occur as a result of the USIBWC project is not known at  
14 this time, but the long-term impacts of the proposed action would be beneficial and would not  
15 contribute to a cumulative impact in combination with the development project.

16 Both projects would result in construction-related short-term disturbances to aesthetics, but  
17 these would be *cumulatively less than significant* because they would be temporary and localized.  
18 The USIBWC project could result in long-term visual changes to the LCR, but the proposed  
19 action would have long-term beneficial aesthetic impacts and would not contribute to a  
20 cumulative impact in combination with the development project.

21 Both projects would result in increased ambient noise levels during construction, but impacts  
22 would be *cumulatively less than significant* because noise impacts are highly localized, and  
23 impacts would be temporary, lasting only for the duration of the construction. Both the  
24 proposed action and the USIBWC project likely would have only minor, short-term, and  
25 localized impacts on hazards, geology and soils, and water quality, and the impact would be  
26 *cumulatively less than significant*.

27 *Nevada Division of State Lands Floating Docks*

28 *Project Description*

29 This project would involve the replacement of a dock system and ramps for private use near the  
30 Regency Casino property near Laughlin in Clark County, Nevada. In order to protect property  
31 from erosion from heavy flows in the early 1980s, Clark County Public Works, the State of  
32 Nevada, and Reclamation cooperated in the emergency placement of several jetties and riprap  
33 protection along the developed portion of the LCR in the project area and subsequently the  
34 dock system was constructed.

35 *Project's Environmental Analysis Status and Anticipated Impacts*

36 No environmental documentation has been prepared for this project. Impacts likely would be  
37 construction related, including impacts on aesthetics, biological resources, air quality, hazards  
38 (due to the use of hazardous materials during construction), water quality (due to the use of  
39 hazardous materials during construction), and geology and soils. Long-term aesthetic impacts

may also occur. The permit issued by the Corps of Engineers, however, requires compliance with applicable water quality standards (including compliance with Section 404 of the Clean Water Act); minimization of adverse impacts on wildlife; the institution of measures to cover exposed foam floatation on the dock to avoid degradation due to wave action or fauna; avoidance of toxic pollutants in discharged dredge material; and the implementation of erosion avoidance measures.

##### *Cumulative Impacts with the Proposed Action*

Both the proposed action and the floating docks project would result in construction-related air quality impacts from increased combustive and PM<sub>10</sub> emissions. Combustive emissions from both projects would be mobile and intermittent and would be cumulatively *less than significant*. The proposed action would result in a significant, potentially unavoidable, impact from increased PM<sub>10</sub> emissions, and if construction associated with the proposed action and floating docks project occurred at the same general time and in the same general location, fugitive dust emissions would be cumulatively *significant*.

Both projects would have the potential for impacts on aquatic and terrestrial biological resources, but these would be cumulatively *less than significant* because the impacts of the proposed action would be temporary and localized and would not cause substantial adverse changes to vegetation or wildlife communities along the LCR. Additionally, the Corps permit would require the implementation of measures that would minimize adverse impacts on wildlife.

Both projects would result in construction-related short-term disturbances to aesthetic resources, but these would be *less than significant* since they would be temporary and localized. Since the floating docks project would involve the replacement of existing docks and ramps, it would not result in long-term aesthetic impacts and no long-term cumulative impacts would occur. The proposed action and the floating docks project would have only minor, short-term, and localized construction-related impacts on hazards, geology and soils, and water quality, and the cumulative impact would be *less than significant*.

##### *South Point/Calpine Cogeneration Plant*

###### *Project Description*

This project would involve the long-term lease of Fort Mojave Indian Reservation lands in Mohave County, Arizona to Calpine for the development of the Southpoint Power Plant. The power plant would be a natural gas fired, 500 megawatt, combined cycle power facility on a 320-acre site. The Southpoint Power Plant project would use water withdrawn from the LCR and piped to the plant in a buried pipeline. Two onsite wells would provide a backup water supply. The project would require up to 4,000 af of water per year. Wastewater produced by the plant would be piped for disposal to a lined evaporation pond. Approximately 94 af of water per year would be piped to the pond to evaporate. A similarly lined 3-acre interim storage pond would also be constructed as part of the project. Stormwater would be retained in on-site retention basins approximately 30 acres in size. Approximately 212 acres of the site would remain undeveloped and would serve as a buffer surrounding the power plant.

1 *Project's Environmental Analysis Status and Anticipated Impacts*

2 A Final EIS for the Southpoint Power Plant project was issued by the BIA in January of 1999.  
3 Significant but mitigable impacts were identified for the project's preferred alternative for  
4 transportation (increased traffic on County Route 227 and State Route 95 during construction);  
5 air resources (construction and plant operational activities); and community infrastructure  
6 (hazardous materials and fire protection response capabilities).

7 *Cumulative Impacts with the Proposed Action*

8 Both the proposed action and the cogeneration plant project would result in construction-  
9 related air quality impacts from increased combustive and PM<sub>10</sub> emissions. Combustive  
10 emissions from both projects would be mobile and intermittent and would be *cumulatively less*  
11 *than significant*. The proposed action would result in a significant, potentially unavoidable,  
12 impact from increased PM<sub>10</sub> emissions, and if construction associated with the proposed action  
13 and the cogeneration plant project occurred at the same general time and in the same general  
14 location, fugitive dust emissions would be *cumulatively significant*. The cogeneration plant  
15 would have long-term air quality impacts, but the proposed action would have only  
16 intermittent impacts associated with maintenance activities spread over a wide area, and long-  
17 term cumulative air quality impacts would not occur.

18 The proposed action would result in minor, temporary, and localized transportation impacts,  
19 and no cumulative impact would occur.

20 Impacts related to hazardous materials would be *cumulatively less than significant* since impacts  
21 of the proposed action would be temporary and minor and impacts of both would be localized.  
22 The proposed action would not impact fire protection response capabilities, and no cumulative  
23 impacts would occur.

24 **4.3 IMPACTS BY RESOURCE**

25 This section provides a summary of the potential cumulative impacts, organized by resource  
26 area, which would result from the implementation of the proposed action and the projects  
27 analyzed above. Mitigation measures to reduce significant impacts are also identified.

28 **4.3.1 Aesthetics**

29 No significant cumulative impacts would result from implementation of the proposed action in  
30 combination with the projects described above. *Cumulatively less than significant* construction-  
31 related impacts would result from the proposed action and other projects since they would be  
32 short-term, localized, and would not result in substantial adverse aesthetic changes. While the  
33 development projects would result in visual changes to the character of the LCR through the  
34 development of open space, the proposed action would result in overall long-term beneficial  
35 aesthetic impacts. Therefore, no long-term adverse cumulative impacts would result from the  
36 implementation of the proposed action in combination with the development projects. Long-  
37 term impacts of the proposed action would be *cumulatively beneficial* in combination with other  
38 restoration projects since a more natural appearance would be restored to the affected lands.

### 4.3.2 Agricultural Resources

The proposed action may result in the conversion Important Farmland to other land cover types, and other projects also could affect agricultural resources. For example, the changes in points of diversion of up to 1.574 mafy of Colorado River could result in long-term fallowing of agricultural land, the YEW project would result in the conversion of farmland to other uses (400 acres), the Mayflower Park Improvements and Expansion project would convert 65 acres of Important Farmland, the PVID project would result in less than significant impacts on agricultural uses, and the Needles Highway Improvement project would disrupt tribal agricultural activities. The impact would, however, be *cumulatively less than significant* because the total amount of farmland that could be affected is not substantial compared to the overall amount available in the planning area. Assuming the proposed action converted 8,132 acres, a total of 8,597 acres would be converted in the planning area or approximately 3.8 percent of the total Important Farmland in the planning area. Moreover, these impacts would be offset by the implementation of a number of tribal farmland development/irrigation projects described in section 4.2.1, including the (1) CRIT plan to bring an additional 25,000 acres into agricultural production should Congress appropriate adequate funds; (2) Fort Mojave Tribe plan to fully develop its farmland, which would increase farmed acreage by approximately 3,745 acres; (3) the Chemehuevi Tribe plan to irrigate up to 1,855 acres of agricultural land; (4) Fort Yuma Agency plan to irrigate 650 acres of agricultural land; and the (5) Cocopah Tribe plan to irrigate three agricultural sites, totaling 500 acres.

### 4.3.3 Air Quality

*Cumulatively significant* impacts associated with PM<sub>10</sub> and NO<sub>x</sub> emissions could occur if the proposed action were implemented at the same time and in the same general location as other projects requiring construction or controlled burns. These impacts would be at least partially mitigable through the implementation of the mitigation measures listed below; however, residual, *cumulatively significant and unavoidable* impacts could occur since these measures may not adequately reduce impacts below the significance thresholds identified in this EIS/EIR.

**C-AQ-1** One or more of the following measures shall be implemented as standard operating practices to minimize fugitive dust (PM<sub>10</sub>) emissions during construction activities.

1. Comply with applicable local and state rules that regulate proposed sources of fugitive dust.
2. Apply water or other dust palliatives to areas where vehicles and equipment perform ground-disturbing activities on dry soil.
3. Reduce dust from dirt roads used by project equipment with the use of pavement, gravel, water, or non-toxic soil stabilizers.
4. Increase water applications or reduce ground-disturbing activities as wind speeds increase. Curtail ground-disturbing activities when sustained wind speeds exceed 25 miles per hour.
5. Minimize the amount of disturbed area.

6. Cover inactive soil stockpiles or treat them with soil binders, such as crusting agents or water them to keep moist.
7. Cover trucks that haul soils or fine aggregate materials.
8. Clean dirt from construction vehicle tires and undercarriages when leaving the construction site and before entering local roadways.
9. Sweep streets near the construction area at the end of the day if soil track-out occurs on these roadways.
10. Designate personnel to monitor dust control program activities to ensure that they effectively minimize fugitive dust emissions.

**C-AQ-2** A smoke management plan shall be implemented for all construction and maintenance activities involving the use of fire.

**C-AQ-3** Implementation of Best Available Control Technology (BACT) measures will be implemented to minimize operational impacts from the Southpoint Power Plant project.

#### 4.3.4 Biological Resources

The proposed action could result in construction-related, less than significant impacts on most biological resources, although some impacts associated with backwater creation would be significant but mitigable, as would impacts on common and sensitive native fish species in the Virgin and Muddy rivers. Other projects also could result in temporary, construction-related impacts on biological resources. The combined impacts of these projects generally would be *cumulatively less than significant* since the impacts of all projects would be temporary and localized and would not cause substantial adverse changes to vegetation or wildlife communities along the LCR. To the extent that other projects affected native fish species along the Virgin and Muddy rivers, impacts could be *cumulatively significant but mitigable to less than significant*.

While the development projects could result in long-term impacts on biological resources through the development of open space, the proposed action would result in overall long-term beneficial impacts on biological resources. Therefore, no long-term, adverse cumulative impacts would result from the implementation of the proposed action in combination with the development projects. Moreover, *cumulatively beneficial* biological impacts would result from the proposed action in combination with other restoration projects. The proposed action would establish 8,132 acres of conservation area with native plant community restoration, and a number of other projects also would result in native vegetation and aquatic habitat restoration, including the Mittry Lake Emergency Stabilization Project (475 acres), Mittry Lake Hazardous Fuels Reduction and Riparian Restoration Project (80 acres), YEW (1,400 acres), YWW (145 acres), Clark County HSHCP (100,000 acres), and the Cocopah Tribe River Restoration Project (unknown acreage). Additionally, as described in section 4.2.4, a number of other conservation and restoration projects are ongoing in the planning area.

Mitigation measures for significant cumulative impacts on native species in the Virgin and Muddy rivers are as follows:

**C-BIO-1** Design site-specific land cover type establishment plans to avoid and minimize potential effects on sensitive native fish habitats along the Virgin and Muddy rivers. Preparation of the design plans shall be coordinated with and approved by the Service as part of section 7 consultation. If appropriate, design plans shall include measures to rehabilitate any affected habitat.

#### 4.3.5 Cultural and Historic Resources

*Cumulatively significant* impacts could occur because the proposed action could result in significant impacts on cultural resources, as could the Riverfront project and possibly other projects requiring ground disturbance, such as the construction of water conservation measures associated with the changes in points of diversion of up to 1.574 mafy of Colorado River water. These impacts would be *mitigable to less than significant* through the implementation of the following measures.

**C-CULT-1:** One or more of the following mitigation measures shall be implemented:

1. Consult with the appropriate SHPO(s), tribes, and other interested parties, perform archival research, interview informants, and conduct cultural resource inventories during site-specific environmental review to identify any cultural resources that may be affected. Consult with geologists, geomorphologists, and/or geophysicists to determine if there are areas that may contain buried cultural deposits and to determine the appropriate methods/techniques for locating these. Implement subsurface exploration activities as a part of the inventory and identification program.
2. Evaluate all identified cultural resources for potential listing on the NRHP or state or local registers with respect to applicable criteria and appropriate historic themes, research questions, and data requirements as identified in regional, local, and/or project specific historic contexts.
3. Modify project design, if feasible, to avoid cultural resources found eligible for listing on the national, state, or local registers.
4. When required (i.e., in California), consult with the SHPO, tribes, and other interested parties to develop and implement, prior to construction, a "Testing and Evaluation Plan" if "potentially significant" archaeological sites cannot be avoided through project redesign.
5. If an archaeological site eligible for listing on the national, state, or local registers of historic places cannot be avoided through project redesign, in consultation with the appropriate SHPO, tribes, and other interested parties, develop and implement a Data Recovery Plan. If the eligible property is a building or structure, consult with the appropriate SHPO and other interested parties, and document the resource to the agreed to standards.
6. Develop a Cultural Resources Construction Monitoring Plan prior to construction if ground disturbance would occur within any areas of potential archaeological sensitivity.
7. In the event of an unanticipated cultural resource discovery during construction, re-direct construction to other areas until the discovery has been documented by a qualified archaeologist and its potential significance evaluated in terms of applicable

criteria. Resources considered significant would be avoided or subject to a testing and evaluation program and/or a data recovery program as described above.

8. If the project has the potential to discover or otherwise result in the excavation of Native American cultural items on Federal or tribal lands, then the appropriate Federal agency or agencies will initiate consultation with any known lineal descendants and relevant Indian tribes as per the Native American Graves Protection and Repatriation Act (NAGPRA). Consultation would identify, among other things, procedures that would be followed in the event that project-related activities resulted in the excavation or discovery of Native American human remains on Federal or tribal lands. If cultural resources or human remains were discovered on non-Federal or non-tribal lands, state and local laws would be followed.

9. Procedures that would be identified under item 8, above, would be incorporated into all archaeological testing and data recovery plans and the Cultural Resources Construction Monitoring Plan as appropriate.

#### 4.3.6 Energy and Depletable Resources

The proposed action would require only minor consumption of energy and depletable resources and would not adversely affect hydropower production. Cumulative impacts would be minor.

#### 4.3.7 Environmental Justice

The proposed action would result in environmental justice impacts associated with air quality and noise emissions and the loss of agricultural jobs. Impacts associated with air quality and noise emissions would be short-term and localized (with the exception of impacts associated with noise from pumps, which would be ongoing, but highly localized, affecting only those persons in the immediate vicinity). Noise impacts from individual projects could, however, disproportionately affect low income and minority populations. These impacts would be *mitigable* through implementation of **Mitigation Measures C-EJ-1 and C-EJ-2**.

Air quality-related impacts could be short-term but could cumulatively disproportionately affect low income and minority populations if construction occurred in the same geographic area at the same time. Implementation of **Mitigation Measures C-AQ-1, C-AQ-2, and C-AQ-3**, identified in section 4.3.3, would reduce cumulative impacts, but those associated with fugitive dust could be *substantial* on a temporary basis.

A number of projects considered in the cumulative impact analysis could result in the loss of agricultural jobs, including the proposed action, which could convert up to 8,132 acres of agricultural land to other land cover types; the changes in points of diversion of up to 1.574 mafy of Colorado River water, which could result in long-term fallowing; the YEW project, which would result in the conversion of 400 acres of farmland to other uses; and the Mayflower Park Improvements and Expansion project, which would convert 65 acres of Important Farmland. To some extent, this could be offset by the tribal farmland and irrigation projects described in section 4.2.1, including the (1) CRIT plan to bring an additional 25,000 acres into agricultural production should Congress appropriate adequate funds; (2) Fort Mojave Tribe plan to fully develop its farmland, which would increase farmed acreage by approximately

3,745 acres; (3) the Chemehuevi Tribe plan to irrigate up to 1,855 acres of agricultural land; (4) Fort Yuma Agency plan to irrigate 650 acres of agricultural land; and the (5) Cocopah Tribe plan to irrigate three agricultural sites, totaling 500 acres. The potential still exists, however, for disproportionate cumulative impacts on minority and low-income populations from the loss of agricultural jobs. This impact would be *mitigable* through the implementation of **Mitigation Measure C-EJ-3**.

**C-EJ-1** When construction occurs sufficiently close to noise-sensitive receptors so that noise from construction activities exceeds local regulatory standards or causes a substantial increase in ambient noise levels, one or more of the following measures shall be implemented. This list does not preclude the use of additional mitigation measures if appropriate.

- Use hydraulically or electrically powered impact tools when possible. If the use of pneumatically powered tools is unavoidable, use an exhaust muffler on the compressed air exhaust.
- Install manufacturer's standard noise control devices, such as mufflers, on construction equipment.
- Locate stationary equipment as far as possible from noise-sensitive receptors.
- Notify nearby property users whenever extremely noisy work might occur.
- Use stockpiles as noise barriers when feasible.
- Keep idling of construction equipment to a minimum (no more than 30 minutes) when not in use.
- Install temporary or portable acoustic barriers around stationary construction noise sources.
- As appropriate, modify noise enclosures with acoustical louvers, baffle walls, and/or acoustical panels.
- Whenever possible, limit construction activities to non-mating, non-nesting seasons of noise-sensitive species.

**C-EJ-2** If pumps cannot be located at sufficient distances from sensitive receptors to avoid the exceedance of a local noise standard or a substantial increase in the ambient noise level at the sensitive receptors, then barriers or enclosures shall be constructed to ensure adherence to local standards.

**C-EJ-3** The lead agencies shall work with local jurisdictions and/or growers to ensure that agricultural workers are notified as soon as possible of the potential for a loss of jobs once specific project locations have been identified. They will encourage the local jurisdictions and/or growers to provide timely information and assistance to agricultural workers regarding the availability of alternative employment.

**4.3.8 Hazards and Hazardous Materials**

No significant cumulative impacts associated with hazards or hazardous materials were identified. Impacts would be minor and localized, and impacts would be *cumulatively less than significant*.

**4.3.9 Hydrology and Water Quality**

No significant cumulative impacts associated with hydrology and water quality were identified. Impacts of the proposed action would be minor and localized and would not contribute to a cumulative impact in combination with the impacts of other projects.

**4.3.10 Indian Trust Assets**

The proposed action could affect ITAs, but none of the projects described above have identified impacts on ITAs; therefore, no cumulative impacts would occur.

**4.3.11 Land Use**

No significant cumulative impacts would result from the implementation of the proposed action in combination with the projects described above. The proposed action would result in the change of undeveloped or agricultural land to other land cover types, but the Conservation Plan would be implemented in a manner that was consistent with local zoning ordinances and general plan requirements and thus would not contribute to an adverse cumulative impact.

**4.3.12 Noise**

No significant cumulative impacts associated with noise were identified. Noise from the proposed action would be highly localized, and impacts from construction would be short-term. Since noise impacts from the proposed action and other projects would be unlikely to occur in the same time and at the same location, and the proposed action would avoid developed areas, impacts would be *cumulatively less than significant*.

**4.3.13 Population and Housing**

No significant cumulative impacts would result from the implementation of the proposed action in combination with the projects described above. The proposed action would not affect population or housing and thus would not contribute to a cumulative impact.

**4.3.14 Public Utilities and Services**

No significant cumulative impacts would result from the implementation of the proposed action in combination with the projects described above. The proposed action would have negligible impacts on public utilities and services and would not contribute to a significant cumulative impact in combination with other projects.

### 4.3.15 Recreation

*Cumulatively less than significant* impacts would result from the implementation of the proposed action in combination with the projects described above. The proposed action would result in a minor loss of recreational opportunities. The Riverfront project also would have impacts on recreational resources from the increased use of the LCR. This increased use from the creation of 34 residences would not result in a significant cumulative impact on recreational resources in combination with the proposed action, particularly in light of the large amount of area available for recreational activities along the river. Some projects, such as the YWW and Mittry Lake Emergency Stabilization and Rehabilitation Project, would result in long-term beneficial impacts on recreational resources. Short-term loss of access to the recreational resources of Mittry Lake from the latter project would not contribute to a cumulative impact in combination with the proposed action since they likely would not overlap in time.

### 4.3.16 Socioeconomics

The proposed action would result in the loss of agricultural jobs and revenue and could result in a reduction in property and sales tax, as well. Similar impacts could result from other projects, identified in section 4.3.2, that would result in the conversion of agricultural land to other uses. The amount of jobs and taxes affected by these projects would be minor in comparison to the overall regional economy. The Farmland Development/Construction of Irrigation Systems project could result in increased agricultural employment opportunities, and could increase sales tax revenues to the extent that products related to agricultural uses were purchased. Other urban development projects could result in increased property and sales tax revenues and could create other employment opportunities. The adverse cumulative socioeconomic impacts of these projects would not be substantial.

### 4.3.17 Topography, Geology, Soils, and Mineral Resources

*Cumulatively less than significant* impacts would result from the implementation of the proposed action in combination with the projects described above. Impacts of the projects considered would be short-term and localized and would not contribute to a significant cumulative impact.

### 4.3.18 Transboundary Impacts

The proposed action could result in temporary fugitive dust emissions and intermittent combustive emissions. These air emissions would last only for the duration of the construction or maintenance activity and would dissipate as the distance from the construction site increased. The portion of Mexico that is near Reach 7 is in agricultural use and is sparsely populated. Thus, sensitive receptors would not be adversely affected by these air emissions. Over the long-term, to the extent that agricultural land is converted to other land cover types, emissions would be reduced since fields would no longer be plowed. The proposed action would not result in substantial adverse impacts on Mexico. The Lower Colorado River Boundary and Capacity Preservation Project could result in air quality impacts, but cumulative impacts would only occur if construction activities of both projects took place at the same time near Mexico. Cumulative impacts would not be substantial because the portion of Mexico that is near Reach 7 is in agricultural use and is sparsely populated and because impacts would be temporary.

1   **4.3.19   Transportation**

2   No significant cumulative impacts would result from the implementation of the proposed  
3   action in combination with the projects described above. Transportation impacts of the  
4   proposed action would be minor, short-term, and localized and would be unlikely to occur in  
5   the same location at the same time as those of other projects.

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